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ABSTRACT

The present invention pertains to luminescent dyes and methods for covalently attaching the dyes to a component or mixture of components so that the components may be detected and/or quantified by luminescence detection methods. The dyes are cyanine and cyanine-type dyes that contain or are derivatized to contain a reactive group. The reactive group is covalently reactive with amine, hydroxy and/or sulfhydryl groups on the component so that the dye can be covalently bound to the component. In addition, the dyes are preferably soluble in aqueous or other medium in which the component is contained. The components to be labeled can be either biological materials, such as antibodies, antigens, peptides, nucleotides, hormones, drugs, or non-biological materials, such as polymers, glass, or other surfaces. Any luminescent or light absorbing detecting step can be employed in the method of the invention.